Glypican-3
Concentrated and Prediluted Monoclonal Antibody
901-396-020618

Catalog Number: CM 396 A, B
Description: 0.1, 0.5 ml, concentrated
Dilution: 1:100
Diluent: ReoNir Red

Intended Use:
For In Vitro Diagnostic Use
Glypican-3 [1G12] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of glypican-3 protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:
Glypican-3 (GPC3) is a member of the glypican family of glycosylphosphatidylinositol-anchored cell-surface heparin sulfate proteoglycans. The 1G12 clone has been used to assess GPC3 expression in malignant and non-malignant tissue samples of the liver. Studies have shown that GPC3 protein is expressed in most hepatocellular carcinomas (HCC), but is undetectable in normal liver and benign hepatic lesions, including dysplastic and cirrhotic nodules. GPC3 is also significantly elevated in the serum of most patients with HCC. Several studies report that Glypican-3 is a sensitive diagnostic marker for HCC and a tool for differentiating HCC from non-neoplastic and pre-neoplastic liver disease. Our TMA-based studies have shown that Glypcan-3 is positive in 90.4% (66/73) of hepatocellular carcinoma cases, and negative in 100% of cholangiocellular carcinoma, normal liver and hyperplasia cases.

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human
Clone: 1G12
Isotype: IgG1
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: C-terminal 70 amino acids
Cellular Localization: Membrane and cytoplasm
Positive Tissue Control: Hepatocellular carcinoma
Known Applications: Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative

Storage and Stability:
Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Protocol Recommendations:
Protocol Recommendations Cont’d:
Protocol Recommendations:

Protocol Recommendations:

Peroxide Block: Block for 5 minutes with Biocare's Peroxidized 1.


Limitations:
The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titer listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The technical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

Quality Control:
Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (CLSI 2011)

Precautions:
1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (Na35) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (5)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (6)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
Precautions Cont’d:
6. The SDS is available upon request and is located at http://biocare.net.

Troubleshooting:
Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

References: